

WHAT IS CLAIMED IS:

1 1. A wine fermentation device for fermenting wine, and skins, seeds and stems
2 which form a cap, which comprises:

3 a tank having cylindrical walls, an axis and a bottom;

4 at least one drain at or near said tank bottom; and

5 at least one impeller, each impeller having a plurality of blades to radially and
6 axially move said cap in said tank during fermentation and to blend said cap with liquid to
7 permit draining of said cap (or pomace) through said drain.

1 2. A wine fermentation device as set forth in Claim 1 including at least one
2 interior baffle extending from said cylindrical tank walls toward said axis.

1 3. A wine fermentation device as set forth in Claim 2 including three said interior
2 baffles.

1 4. A wine fermentation device as set forth in Claim 1 having two said impellers,
2 one near said bottom and one spaced axially therefrom.

1 5. A wine fermentation device as set forth in Claim 1 wherein each said impeller
2 has three blades.

1 6. A wine fermentation device as set forth in Claim 1 wherein each said blade
2 has a 45° pitch.

1 7. A wine fermentation device as set forth in Claim 1 wherein said tank bottom
2 is not perpendicular to said axis but is sloped in relation thereto.

1 8. A wine fermentation device as set forth in Claim 1 including a temperature
2 control jacket to control temperature of said wine in said tank and a temperature gauge.

1 9. A wine fermentation device as set forth in Claim 1 including a shaft for said
2 impeller axially aligned in said tank and a motor to drive said shaft.

1 10. A wine fermentation device as set forth in Claim 1 wherein each said drain
2 includes a valve.

1 11. A wine fermentation device as set forth in Claim 1 wherein said tank includes
2 a top to form a closed vessel.

1 12. A process for wine cap management for fermenting wine and skins, seeds and
2 stems which forms a cap, which process comprises:

3 fermenting said wine and said cap in a tank having cylindrical walls, an axis,
4 and a bottom;

5 moving said wine and said cap radially and axially by periodically rotating an
6 impeller having an axial shaft within said cylindrical tank; and

7 assisting axial flow of said wine with at least one baffle extending from said
8 cylindrical walls toward said axis.

1 13. A process for wine cap management as set forth in Claim 12 which includes
2 the additional steps of adding yeast and sugar to said fermenting wine or must to promote
3 fermentation.

1 14. A process of wine cap management as set forth in Claim 12 which includes the
2 additional step of controlling the temperature of said wine in said tank through a
3 temperature jacket on the walls of said cylindrical tank or on said at least one baffle.

1 15. A process of wine cap management as set forth in Claim 12 wherein said
2 impeller shaft is driven by a motor.

1 16. A process of wine cap management as set forth in Claim 12 including two said
2 impellers extending from said axial shaft.

1 17. A wine pomace removal process for wine and skins, seeds and stems forming
2 a cap fermented in a tank having cylindrical walls, an axis, and a bottom, which process
3 comprises:

4 draining a majority of said wine from said tank;
5 agitating and blending said cap with liquid within said tank to create a pomace
6 slurry; and
7 draining off said pomace slurry through a drain at or near said bottom of said
8 tank.

1 18. A wine pomace removal process as set forth in Claim 17 wherein said drain
2 includes a valve.

3 19. A wine pomace removal process as set forth in Claim 17 wherein said agitating
4 and blending step is accomplished through an impeller having a plurality of blades which are
5 rotated by an axial shaft driven by a motor.

6 20. A wine pomace removal process as set forth in Claim 19 including two said
7 impellers, one located near said tank bottom to agitate and blend said cap.

8 21. A wine pomace removal process as set forth in Claim 17 wherein said bottom
9 of said tank is sloped with respect to said axis of said tank.